

Timika Shafeek-Horton Deputy General Counsel 550 South Tryon Street Charlotte, NC 28202

Mailing Address: DEC 45A/PO Box 1321 Charlotte, NC 28201 704 382 6373 Direct 980 373 8534 Fax

Email Timika.Shafeek-Horton@duke-energy.com

April 16, 2012

Jocelyn Boyd Chief Clerk and Administrator Public Service Commission of South Carolina 101 Executive Center Dr., Suite 100 Columbia, SC 29210

Re: Docket No. 2012-\_-E: Residential Neighborhood Program

Dear Ms. Boyd:

Duke Energy Carolinas, Inc. ("Duke Energy" or the "Company") hereby submits for approval a tariff, attached as Exhibit 1, covering a new residential energy efficiency program, the Residential Neighborhood Program. Through this program, which is similar to Progress Energy Carolinas, Inc.'s Neighborhood Energy Saver Program, Duke Energy will help residential customers in income qualified neighborhoods reduce energy consumption by performing energy assessments and installing, at no charge to the customer, the energy saving measures identified by the assessment. The program will also provide energy education to help customers attain even greater energy savings. Neighborhoods in which approximately 50% of the households have incomes of 0%-200% of the federal poverty guidelines can qualify to participate. Once the program is approved, Duke Energy will identify qualifying neighborhoods and will give participation priority to neighborhoods identified via energy usage data as having the greatest need.

As with every new energy efficiency program Duke Energy proposes, the Company has evaluated the expected participation in the program and applied multiple cost-effectiveness analyses to the implementation of the program. The Company has attached as Exhibit 2 a document showing the expected participation level. Exhibit 3, also attached, is the benefit/cost ratio which supports implementation.

Please let me know if you have questions or comments about this matter.

Sincerely,

Timika Shafeek-Horton

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Electricity No. 4

South Carolina Original (Proposed) Leaf No. 161

### RESIDENTIAL NEIGHBORHOOD PROGRAM (SC)

## **PURPOSE**

The purpose of this program is to assist low-income customers reduce energy costs through energy education and by installing or providing energy conservation measures for the customer's residence.

#### **AVAILABILITY**

This program is available only to individually-metered residential customers in neighborhoods selected by Company, at its sole discretion, which are considered low-income based on third party data which includes income level and household size. Areas targeted for participation in this program will typically have 50% or more of the households with income equal to or less than 200% of the poverty level established by the U. S. Government.

#### **PROGRAM**

Under this program, participating customers will receive the following:

- An energy assessment to identify energy efficiency opportunities in the customer's home.
- One-on-one education on energy efficiency techniques and measures.
- A comprehensive package of energy conservations measures. Each measure listed below will be installed or provided to the extent the measure is identified as an energy efficiency opportunity based on the results of the energy assessment.
  - 1. Compact Fluorescent Bulbs Up to fifteen (15) compact fluorescent bulbs to replace incandescent bulbs.
  - 2. Electric Water Heater Wrap and Insulation for Water Pipes.
  - 3. Electric Water Heater Temperature Check and Adjustment.
  - 4. Low-Flow Faucet Aerators Up to three (3) low-flow faucet aerators.
  - 5. Low-Flow Showerheads Up to two (2) low-flow showerheads.
  - 6. Wall Plate Thermometer.
  - 7. HVAC Winterization Kits Up to three (3) winterization HVAC kits for wall/window air conditioning units will be provided along with education on the proper use, installation, and value of the winterization kit as a method of stopping air infiltration.
  - 8. HVAC Filters A one-year supply of HVAC filters will be provided along with instructions on the proper method for installing a replacement filter.
  - 9. Change Filter Calendar.
  - 10. Air Infiltration Reduction Measures Weather stripping, door sweeps, caulk, foam sealant, and clear patch tape will be installed to reduce or stop air infiltration around doors, windows, attic hatches, and plumbing penetrations.

# Residential Neighborhood Program Projected Participation

	Program Name	Neighborhood Low Income	
1	Measure Life	7	
2	Free Rider %	0%	
3	Incremental Participants Year 1	2,410	
4	Incremental Participants Year 2	2,410	
5	Incremental Participants Year 3	2,410	
6	Incremental Participants Year 4	2,410	
7	Incremental Participants Year 5	2,410	
	Cumulative Participation Year 1	2,410	
9	Cumulative Participation Year 2	4,820	
10	Cumulative Participation Year 3	7,230	
11	Cumulative Participation Year 4	9,640	
12	Cumulative Participation Year 5	12,050	
13	Cumulative Summer Coincident kW w/ losses (net free) Year 1	426	
14	Cumulative Summer Coincident kW w/ losses (net free) Year 2	852	
15	Cumulative Summer Coincident kW w/ losses (net free) Year 3	1,158	
16	Cumulative Summer Coincident kW w/ losses (net free) Year 4	1,465	
17	Cumulative Summer Coincident kW w/ losses (net free) Year 5	1,772	
18	Cumulative kWh w/ losses (net free) Year 1	2,295,670	
19	Cumulative kWh w/ losses (net free) Year 2	4,591,339	
20	Cumulative kWh w/ losses (net free) Year 3	6,244,221	
21	Cumulative kWh w/ losses (net free) Year 4	7,897,103	
22	Cumulative kWh w/ losses (net free) Year 5	9 549 986	
	Per Participant Coincident Saved Winter kW w/losses	0.14	
	Per Participant Coincident Saved Summer kW w/losses	0.18	
	Per Participant Annual kWh w/losses Year 1	953	
26	Per Participant Annual kWh w/losses Year 2	953	
27	Per Participant Annual kWh w/losses Year 3	953	
28	Per Participant Annual kWh w/losses Year 4	953	
29	Per Participant Annual kWh wlosses Year 5	953	
30	Cumulative Lost Revenue (Net Free Riders) Year 1	\$195,665	
31	Cumulative Lost Revenue (Net Free Riders) Year 2	\$400,448	
	Cumulative Lost Revenue (Net Free Riders) Year 3	\$557.298	
	Cumulative Lost Revenue (Net Free Riders) Year 4	\$721,241	
34	Cumulative Lost Revenue (Net Free Riders) Year 5	\$892,520	
	Lost Revenue per Participant Year 1	\$81	
	Lost Revenue per Participant Year 2	\$83	
	Lost Revenue per Participant Year 3	\$85	
	Lost Revenue per Participant Year 4	\$87	
	Lost Revenue per Participant Year 5	\$89	
	Total Avoided Costs/MW saved Year 1	\$113,258	
	Total Avoided Costs/MW saved Year 2	\$117,135	
	Total Avoided Costs/MW saved Year 3	\$121,151	
	Total Avoided Costs/MW saved Year 4	\$123,877	
	Total Avoided Costs/MW saved Year 5	\$126,664	
	Total Avoided Costs/MWh saved Year 1	\$44	
	Total Avoided Costs/MWh saved Year 2	\$42	
	Total Avoided Costs/MWh saved Year 3	\$39	
	Total Avoided Costs/MWh saved Year 4	\$42	
	Total Avoided Costs/MWh saved Year 5	\$42	

# Residential Neighborhood Program Cost Effectiveness Evaluation

	Low Income Neighborhood							
		UCT	TRC	RIM	Participant			
1	Avoided T&D Electric	\$596,978	\$596,978	\$596,978				
2	Cost-Based Avoided Production	\$2,055,111	\$2,055,111	\$2,055,111				
3	Cost-Based Avoided Capacity	\$843,013	\$843,013	\$843,013				
4	Lost Revenue	\$0	\$0	\$0	\$4,479,95			
5	Net Lost Revenue	\$0	\$0	\$3,499,898				
6	Administration Costs	\$110,997	\$110,997	\$110,997				
7	Implementation Costs	\$799,395	\$799,395	\$799,395				
8	Incentives	\$1,193,098	\$0	\$1,193,098	\$1,193,09			
9	Other Utility Costs	\$426,653	\$426,653	\$426,653	(			
10	Participant Costs	\$0	\$0	\$0				
11	Total Benefits	\$3,495,102	\$3,495,102	\$3,495,102	\$5,673,04			
12	Total Costs	\$2,530,143	\$1,337,045	\$6,030,041				
13	Benefit/Cost Ratios	1.38	2.61	0.58				

Data represents present value of costs and benefits over the life of the program.